

**CLAIMS**

What is claimed is:

1. A pharmaceutical composition for use in treating gastrointestinal disorders comprising a therapeutically effective amount of secretin in combination with a 5 therapeutically effective amount of oxytocin.

2. The pharmaceutical composition of claim 1, wherein the gastrointestinal disorder is selected from the group consisting of irritable bowel disease, irritable bowel syndrome, diarrhea, incontinence, pelvic floor pain, biliary disorders, abdominal bloating colitis, constipation and gastroduodenal disorders.

10 3. A pharmaceutical composition for use in treating central nervous system disorders comprising a therapeutically effective amount of secretin and oxytocin.

15 4. The pharmaceutical composition of claim 3, wherein the central nervous system disorder is selected from the group consisting of autism and autistic spectrum disorders, seizures, conduct disorder, oppositional defiant disorder (ODD), attentional/arousal dysregulation, attention-deficit/hyperactivity disorder (ADHD), obsessive-compulsive disorder, stereotypies, reactive attachment disorder, social isolation, attachment disorders, face recognition deficits, gaze aversions, and altered heart rate variability.

5. A pharmaceutical composition for use in treating autoimmune disorders comprising a therapeutically effective amount of secretin and oxytocin.

20 6. The pharmaceutical composition of claim 5, wherein the autoimmune disorder is selected from the group consisting of Hashimoto's thyroiditis, pernicious anemia, scleroderma, anti-phospholipid syndrome, autoimmune inner ear disease, Behcet's syndrome, chronic inflammatory polyneuritis, CREST syndrome, Churg Strauss Syndrome, Guillain-Barre syndrome, Goodpasture's syndrome, primary biliary cirrhosis, Crohn's disease, 25 ulcerative colitis, Celiac disease, Wegner's granulomatosis, Sclerosing cholangitis, Addison's disease, type 1 diabetes, rheumatoid arthritis, systemic lupus erythematosus, dermatomyositis, Sjogren's syndrome, lupus erythematosus, multiple sclerosis, myasthenia gravis, Retiter's syndrome and Grave's disease.

30 7. A pharmaceutical composition for use in treating pain comprising a therapeutically effective amount of secretin and oxytocin.

8. The pharmaceutical composition of any of claims 1, 3, 5 or 7 wherein the pharmaceutical composition includes one or more protease inhibitors.

5 9. A method for treating gastrointestinal disorders in a subject, comprising administering to the subject a therapeutically effective amount of secretin in combination with a therapeutically effective amount of oxytocin.

10 10. The method of claim 1, wherein the gastrointestinal disorder is selected from the group consisting of irritable bowel disease, irritable bowel syndrome, diarrhea, incontinence, pelvic floor pain, biliary disorders, abdominal bloating colitis, constipation and gastroduodenal disorders.

11 11. A method for treating central nervous system disorders in a subject, comprising administering to the subject a therapeutically effective amount of secretin in combination with a therapeutically effective amount of oxytocin.

12 15 12. The method of claim 11, wherein the central nervous system disorder is selected from the group consisting of autism and autistic spectrum disorders, seizures, conduct disorder, oppositional defiant disorder (ODD), attentional/arousal dysregulation, attention-deficit/hyperactivity disorder (ADHD), obsessive-compulsive disorder, stereotypies, reactive attachment disorder, social isolation, attachment disorders, face recognition deficits, gaze aversions, and altered heart rate variability.

13 20 13. A method for treating autoimmune disorders in a subject, comprising administering to the subject a therapeutically effective amount of secretin in combination with a therapeutically effective amount of oxytocin.

14 25 30 14. The method of claim 13, wherein the autoimmune disorder is selected from the group consisting of Hashimoto's thyroiditis, pernicious anemia, scleroderma, anti-phospholipid syndrome, autoimmune inner ear disease, Behcet's syndrome, chronic inflammatory polyneuritis, CREST syndrome, Churg Strauss Syndrome, Guillain-Barre syndrome, Goodpasture's syndrome, primary biliary cirrhosis, Crohn's disease, ulcerative colitis, Celiac disease, Wegner's granulomatosis, Sclerosing cholangitis, Addison's disease, type 1 diabetes, rheumatoid arthritis, systemic lupus erythematosus, dermatomyositis, Sjogren's syndrome, lupus erythematosus, multiple sclerosis, myasthenia gravis, Retiter's syndrome and Grave's disease.

15. A method for treating pain in a subject, comprising administering to the subject a therapeutically effective amount of secretin in combination with a therapeutically effective amount of oxytocin.

5 16. The method of any of claims 9, 11, 13 or 15, wherein the pharmaceutical composition includes one or more protease inhibitors.

17. A kit for use in treating gastrointestinal disorders comprising a combination of secretin and oxytocin.

18. A kit for use in treating central nervous system disorders, comprising a combination of secretin and oxytocin.

10 19. A kit for use in treating autoimmune disorders, comprising a combination of secretin and oxytocin.

20. A kit for use in treating pain, comprising a combination of secretin and oxytocin.

15 21. The kit of any of claims 17, 18, 19 or 20, wherein the kit includes one or more protease inhibitors.

22. A pharmaceutical composition for use in treating Irritable bowel disease comprising a therapeutically effective amount of secretin in combination with a therapeutically effective amount of oxytocin, optionally in combination with a protease inhibitor.

20 23. A method for treating Irritable bowel disease in a subject, comprising administering to the subject a therapeutically effective amount of secretin in combination with a therapeutically effective amount of oxytocin, optionally in combination with a protease inhibitor.